

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1-26. (canceled)

27-38. (canceled)

39. (currently amended) An expression cassette encoding a soluble, fused major histocompatibility complex (MHC) class II heterodimer, which forms a peptide binding groove that associates with an antigenic peptide, the expression cassette comprising the following elements operably linked in order elements:

(a) a transcription promoter;

(b) (i) a first nucleic acid segment encoding a first polypeptide segment consisting essentially of a  $\beta 1$  comprising an  $\beta 1\beta 2$  domain of an MHC class II chain molecule;  
(ii) a second nucleic acid segment encoding a second polypeptide segment consisting essentially of an  $\alpha 1$  comprising an  $\alpha 1\alpha 2$  domain of an MHC class II chain molecule;  
and

(iii) a first linker nucleic acid segment encoding a [first peptide] flexible linker and connecting in-frame the first and second [nucleic acid] DNA segments; wherein said flexible linker comprises the amino acid sequence GGGSGGGSGGGGS (SEQ ID NO: 36) and said  $\beta 1$  domain and said  $\alpha 1$  domain form the peptide binding groove of the MHC class II heterodimer;

wherein linkage of the first nucleic acid segment to the second nucleic acid segment results in a fused first, linker and second nucleic acid polysegment that is capable of expressing a soluble fused, MHC class II heterodimer;

(iv) a third nucleic acid segment encoding an antigenic peptide capable of associating with the peptide binding groove of the MHC class II molecule; and

(v) a second linker nucleic acid segment encoding a flexible linker of 5 to 25 amino acids and connecting in-frame the third nucleic acid segment to the fused first nucleic acid -first linker-second nucleic acid polysegment;

wherein linkage of the third nucleic acid segment to the fused first nucleic acid-first linker-second nucleic acid polysegment results in expression of a soluble fused MHC class II heterodimer:peptide complex; and

c) a transcription terminator.

40. (canceled)

41. (previously presented) The expression cassette of claim 39, wherein the MHC class II  $\beta$ 1 domain is from a human DR1 $\beta$ \*1501  $\beta$  domain.

42. (previously presented) The expression cassette of claim 39, wherein the MHC class II  $\alpha$ 1 domain is from a human DRA\*0101  $\alpha$  domain.

43. (canceled).

44. (currently amended) The expression cassette of claim 40 39, wherein the second linker segment encodes a second peptide linker having the sequence [GASAG (SEQ ID NO:29)] GGSGG (SEQ ID NO:30) or [GGSGGS] GGGSGGS (SEQ ID NO:31).

45. (currently amended) The expression cassette of claim 40 39, wherein the third nucleic acid segment encodes an antigenic peptide capable of stimulating a CD4+ helper T cell-mediated immune response.

46. (previously presented) The expression cassette of claim 39, further comprising an additional nucleic acid segment encoding a signal sequence.

47-49. (canceled)

50. (new) The expression cassette of claim 39, wherein the MHC class II molecule is selected from at least one of a human DR1 $\beta$ \*1501  $\beta$  chain and a human DRA\*0101  $\alpha$  chain.

51. (new) The expression cassette of claim 39, wherein the antigenic peptide is from glutamic acid decarboxylase, type II collagen, thyroglobulin, acetyl-choline receptor, myelin basic protein, or proteolipid protein.

52. (new) The expression cassette of claim 51, wherein the antigenic peptide is from acetyl-choline receptor.

53. (new) The expression cassette of claim 51, wherein the antigenic peptide is selected from the group consisting of SEQ ID NO:59, SEQ ID NO:61, SEQ ID NO:40, SEQ ID NO:39, and SEQ ID NO:33.

54. (new) The expression cassette of claim 51, wherein the soluble fused MHC class II heterodimer:peptide complex induces anergy in T cells.